COOKIA

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Much ado about NORTHLAND | Petone | Bruce Marshall | a feast of shellshows

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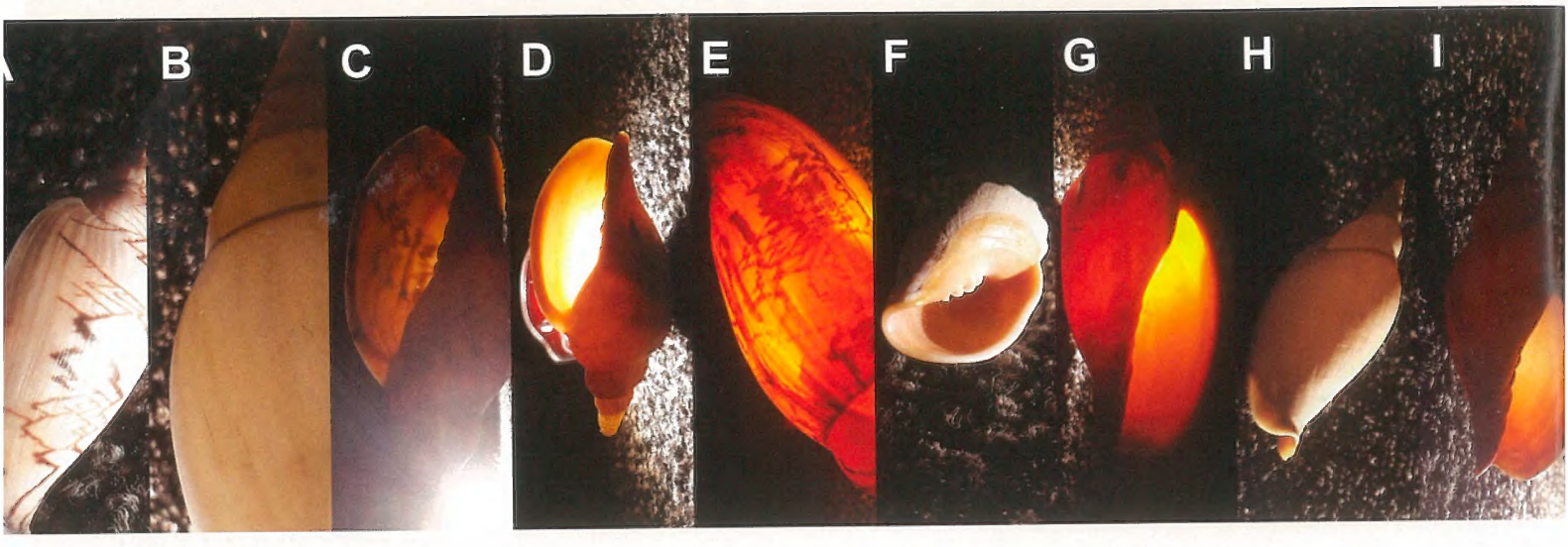

Solution inside rear cover

Kris Woods

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Editorial

During the last year, Dr Bruce Marshall's position at Museum of New Zealand Te Papa Tongarewa was disestablished as part of a wider restructure. Bruce had worked there as a malacologist for over 40 years.

On page 10 we pay tribute to Bruce's achievements and thank him for his long support for our club and its members. Among other things, Bruce developed Te Papa's collection of Mollusca from modest scale to being recognised internationally as one of the best own-country collections in the world. His knowledge of New Zealand Mollusca is profound and unequalled, and he enjoys huge respect from the professional community worldwide.

Following his redundancy, a much less experienced person was appointed to a new curatorial position focussed on Mollusca. Bruce continues to work at Te Papa as an Honorary Research Associate.

All organisations need succession plans and new faces to maintain fresh and strategic thinking. However, only when management teams lack imagination or competence (or both) does restructuring lead to the unhappy and widely deplored outcomes we have seen at Te Papa.

Pat Lakeman

Cover photo: *Pecten novaezelandiae* Reeve, 1852 from Parengarenga Harbour, Northland, New Zealand. 111 mm wide.

Wandering along the coast in Northland

by Chrissie Stephenson

The subtropical north has been an elusive place for me, less visited because I lived in Christchurch for 30 years. My bach at Whananaki had served as my place of refuge and indulgence for the past 11 years. Yes, that is a long way from Christchurch but it ticked many boxes including fishing and shells. My busy life at home was made bearable by walking the sands of Kings, Barrons, and Parapara Beaches, and the nooks and crannies along that coast, with the occasional trip further north - especially Bland Bay - for some excitement and variety. The most exciting finds have been the occasional *Tonna*, bean cowrie and colourful kina.

My move to Whangarei four years ago opened up more options for recreation. This year I bought a six-man tent, which is just perfect for one woman and her beach collection. My first camp was at Bland Bay in February. Trip number 2 had me heading up the highway to set up base camp at Houhora Heads. A previous stay there had delivered a hamper of shells with local lore telling of more treasures of East Beach.

So in March 2019, with the thought of autumn pressing, I set off for Houhora once more with high hopes of the north end of East Beach delivering treasures. The camp and beaches were relatively empty. I was disappointed with the amount of vehicle tracks desecrating the wide sweeps of sand. There was no beach wash to distract me at Houhora Harbour entrance so on Tuesday 12 March I set my eyes on Henderson Bay only 25 km or so further north. It was an early start so that I could make the most of the tide.

The northern end was dominated by weed but juvenile kina had floated up with it. My early morning walk took me south just as the tide turned. I concentrated on the "lap lap" at the base of the beach picking up the common beach wash. The vehicle tracks on the upper beach made me grumpy so I thought it best to stick with the happy place at the shore line. When I did venture further up to the previous high tide line I came across a pectinid shell nestled in the drying piper weed. The shell was intact, familiar yet strange. I was so excited and realised then that I had left my identification book at home. But I did think that the sharp surface was similar to finds in Queensland. Having tucked the little beauty into my kete (woven flax bag), I let the birds distract me and carried on to the southern end of the beach. On my return I followed the higher tide lines left over the previous days. To my amazement I spotted colour in piper weed and found a sporadic line of colourful specimens. The mystery evolved. Was I in Australia or New Zealand? Where did these beautiful specimens come from and how did they come to be in the north of New Zealand on Henderson Bay?

On my way back to camp I stopped for an ice cream, and a local told me of the "mystery boat" being washed ashore on Henderson Beach. I did ask if there were shells on the boat but my informant did not think so. The boat had been missing from Sydney for 18 months!

Gwenda Henderson, secretary of the Whangarei Shell Club examined the photos of my finds carefully. She was adamant that the shells were not local. "Maybe from a boat cleaning its bilge from overseas or maybe even from the south of New Zealand. Her perception and depth of knowledge steered Gwenda in the right direction.

Photo credit: Zak Slaughterman

A Newshub media report on 5 March told of Peter Drybre (sic) – actually Peter Dryburgh - a local fisherman, who found an abandoned boat in Northland and, at first sight, thought it was a beached whale. I called Peter after seeing

his name in a newspaper article.

Peter had gone fishing on the morning of Tuesday 5 March at Henderson Bay, and noticed a big object lying on the beach when he'd come back to shore. Peter's story, reported by Newshub:

"As I waded out it was clear it was the hull of a fishing boat about 5-6 m long, covered with goose barnacles. It looked like it had been in the water for a long time. The goose barnacles had long black stalks - mature ones, these were big - and the cupboards within the boat were just full of these beautiful scallops from about 1-2 cm to about 5 cm." When he went to look closer, the tide pushed a life jacket and some beer holders out of the boat's upturned hull, which is when he realised it had come from overseas. "Every time the tide rushed past, it compressed the air and shot out anything that could float … including life jackets saying 'Blakes Marina', which is in Sydney."

Clearly, as the waves crashed through the boat the live scallops were washed out. With the capsizing of the boat, internal areas had become receptacles which filled with sand and the scallops and a few other shellfish. This tells us that once capsized, it remained so.

So where do you think this boat travelled? How did the sand and scallops get into its compartments? How many landfalls might the boat have made and where?

A second Newshub report on 6 March solved some of the mystery: Dave Nash had been winched from Sydney's waters after a boating accident in September 2017. A large swell had crashed into his fishing vessel, Kenally, filling it up, and eventually overturning it. Attempts to tow it back to shore also failed when a rope snapped. Dave expected he'd never see his dream boat again. But Kenally had eventually washed ashore in Northland, its previously blue-hued hull now silver, with a layer of black barnacles collected on its 2000 kilometre journey to Henderson Bay.

Dave was proud of his boat: "To hear she'd made it all the way there has somehow given her extra personality - and how clever she is to have made it to the East Coast," he told Newshub. "Losing Kenally, though incredibly sad, has never been a big issue for me - but there was a sense of conclusion now she's been found," Mr Nash explained. "It's amazing - just, wow." Dave has high hopes for Kenally's future: "If someone can make use of it, that'd be great, and if they're gonna clean her up, I'd love to see photos - and to know she's still putting around there would be special."

But some mysteries might remain. Peter told me that he saw the colourful scallops swimming snappingly in the water near the boat. Photographs suggest that most of these can be identified as *Mimachlamys asperrima* (Lamarck, 1819) – the well-known doughboy scallop of Australia. And fellow Australian species *Scaeochlamys livida* (Lamarck, 1819) is present also. Was that all the pectinids present? Have a good look … is that *Mimachlamys sanguinea* (Linnaeus, 1758) too?

Many thanks to Peter Dryburgh, Zac Slaughterman and Newshub for photos and/or text contributions to this story.

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Three Kings/Northland expedition

by Kerry Walton & Hamish Spencer

Famed for their difficult access and rough seas, the Three Kings Islands represent a nirvana, of sorts, to those who study or collect molluscs. The islands lie just within visible distance of Cape Reinga on a rare, clear day. The mollusc fauna there, however, is very different to that on the mainland and exceptionally diverse. As there are few safe anchorages nearby and the islands lie far from any readily navigable harbour, most privately-owned craft daren't risk the trip.

The Three Kings are not in any New Zealand region. Rather, they fall within the bothersome (for labelling purposes) category of 'offshore islands' on official documents. Many prefer to treat them as a region in their own right rather than associating them with neighboring Northland. Biogeographically speaking, this makes a lot of sense.

The Three Kings lie where the Tasman Front, a comparatively warm water current that travels eastwards from Australia, meets continental New Zealand. Currents crossing from deep water to shallow water often result in upwelling of cold water from close to the seafloor. This is very apparent at the Three Kings where massive eddies and currents can be clearly seen from the surface on a calm day. The sea surface temperature in the vicinity of the islands is markedly lower than in the surrounding area.

Fishing around the Three Kings is, by all accounts, excellent, although on our trip we were woefully without a single line on the boat – a fact we would lament on several occasions. Several sharks were seen on the surface, including one of at least two metres, and mobs of blue maomao and trevally were frequently seen inshore. A few large fish were seen jumping but it was unclear if these were marlin. No sunfish were sighted.

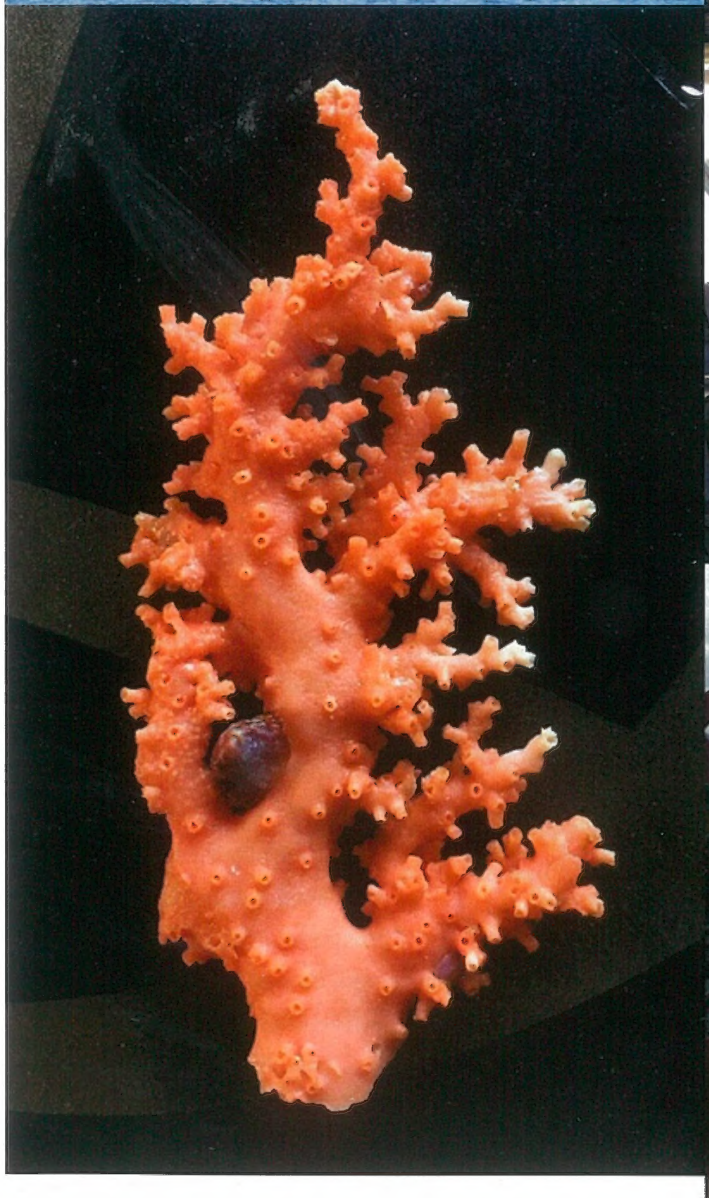
The seabirds too were a delight, once we approached the Aupouri Peninsula as we steamed northwards. We spent many hours on the flybridge; Hamish with binoculars at the ready, Kerry with a camera. Further south, off the Bay of Islands and within the Hauraki Gulf, the birds were comparatively few and far between. Predominantly, these were Buller's shearwaters, with the distinctive M-shaped marking on their back characteristic of that species. There was the odd fluttering shearwater and black petrel thrown in for good measure. Gulls were largely absent.

At one stage, off Bream Head, we had as many as 25 individuals of black petrel, constituting a sizeable proportion of the entire global population, sitting on the water off our stern and watching our actions with bemusement and ever hopeful of getting a feed. Grey ternlets, which roost mainly on West Island, were quite numerous when we approached Princes Pinnacle. Ironically, the most visible (if not actually the most plentiful) of the birds we encountered were shy (aka white-capped) mollymawks, which breed in the New Zealand subantarctic islands and are the most commonly sighted of the albatrosses off Otago.

March 15th. Sea slight, wind NE.

We couldn't have asked for a better day as we cleared Gulf Harbour (just north of Auckland) shortly after midday. Keen to test our equipment, we did a couple of shots (dredge tows) off Kawau and Little Barrier Islands within the Hauraki Gulf, each in about 50 metres. Both contained ample glass-sponge spicules to necessitate the wearing of gloves, which one can normally avoid in shallow water. There were a couple of large *Astraea heliotropium* (Martyn, 1784), which are always nice to see, even if they are often encountered when dredging. Additionally, there was a live *Monoplex exaratus* (Reeve, 1844), several *Murexsul octogonus* (Quoy & Gaimard, 1833), although these were quite encrusted, as well as a decent handful of *Mesopeplum convexum* (Quoy & Gaimard, 1835) that were the small and highly coloured form that is absent in the South Island.

Satisfied with the dredge and vessel, we steamed northwards until we were seaward of the Hen and Chicken Islands. We were not far inshore from where Kevin Burch and Tony McCleary, several years earlier, had had an extremely interesting shot in about 130 metres of water. They had obtained *Monstrotyphis pauperis* (Mestayer, 1916), *Babelomurex lischkeanus* (Dunker, 1882), *Iredalula alticincta* (Murdoch & Suter, 1906), *Bathytoma murdochi* Finlay, 1930,



Clockwise from top left: MV Tranquil Image at Cavalli Islands; Bream Head; Team members working on board at Cavalli Islands; Dredge spoils on deck, with Three Kings Islands in background; *Pedicularia pacifica* Pease, 1865; *P. pacifica* attached to a piece of stylasteran coral.

Varinucula gallinacea (Finlay, 1930) and *Gonimyrtea concinna* (Hutton, 1885), all of which can be difficult to come by. Molecular-grade (preserved in ethanol) samples of all those species would have been very nice indeed! We took two shots in about 110 metres of water in what proved to be fantastic mud. It was a green ooze, which is a healthy and wonderful thing. While not as productive as Kevin's shot, we obtained several of those aforementioned species, as well as many tantalizing *Coluzea spiralis* (A. Adams, 1856) tails. Then, with the sun setting over a distant Bream Head and a Bryde's whale blowing in the distance, we ate and retired for the night.

March 16th. Sea moderate and growing, wind NE.

We awoke at anchor in the lee of the Cavalli Islands, with Matauri Bay and the Rainbow Warrior monument off in the distance. Once fed and ready to go, we took a series of shots around the islands themselves, ranging in depth from 20 to 40 metres. In shallower depths, *Tawera spissa* (Deshayes, 1835), *Cominella adspersa* (Bruguière, 1789) and rhodoliths dominated the bottom, which is typical of inshore waters of the northeastern North Island. At 40 metres, however, in mud, we found some rather nice species indeed. One shot yielded over 120 mollusc species. Notable among these was an excellent but dead-taken specimen of *Heliacus implexus* (Mighels, 1845), a live juvenile of *Adelphotectonica reevei* (Hanley, 1862), *Hypermastus bulbulus* (Murdoch & Suter, 1906), *Solariella plicatula* (Murdoch & Suter, 1906) and *Heterocithara mediocris* Odhner, 1924. Numerically dominant were *Pratulum pulchellum* (Gray, 1843), *Notocallista multistriata* (G.B. Sowerby II, 1851), *Rhinoclama trailli* (Hutton, 1873), *Kuroshioturris angustata* (Powell, 1940), *Microvoluta marginata* (Hutton, 1885) and *Zeacolpus vittatus* (Hutton, 1873). Then, with many sea-miles to go and a steadily picking-up swell, we powered northwards.

Off Cavalli Islands at 40m in mud

Dinner was taken off the Karikari Peninsula and we attempted to sleep before we passed North Cape, whence we would be more fully exposed to an obstinate swell from our beam.

March 17th. Sea slight, wind light.

After an uncomfortable steam through the night, we awoke at dawn in the eerily calm waters of Cascade Bay, on the southwest of Great King Island. Unlike other parts of New Zealand, which even on one's first visit feel vaguely familiar, the Three Kings, in their rugged splendour and great remoteness, had a decidedly exotic feel about them. We were at anchor right in close to the towering sea-cliffs that guard the islands. The air was awash with the song of the endemic Three Kings subspecies of bellbird underpinned by a deep pulsing of the waves crashing on the nearby rocks and echoing against the rocky walls like a heartbeat. We were thrilled to have made it to our destination, which was by no means a certainty when one considers the miserable weather and sea conditions for which the area is known. What's more, the weather was mightily obliging.

After strong caffeinated beverages and a quick glance at a map, we commenced the day's dredging. We made our way slowly north-east to pass Princes Islands, taking four shots as we went, these ranging from 50 to 100 metres. The first came up almost empty. The second shot, the now famous station 12, which was set in about 80 metres of water, was termed the 'shot of a lifetime' by those on the bryozoan team. The dredge was completely full of living bryozoan colonies and sponges, amounting to about 200 litres of material. Footage from cameras towed along the seafloor has shown that living bryozoan thickets such as that we had hit are sparsely distributed and seldom occupy a large area. To have the contents of the dredge as they were was, thus, truly special.

This felt like *Maurea* territory as calliostomatids live on sponges, corals and hydroids, of which there

was an abundance on the deck. Kerry pounced on a football sized *Anchorina* sponge, on which several *Maurea* species are known to feed. Although it did not show any sign of grazing, there was a juvenile *Maurea gibbsorum* (B.A. Marshall, 1995) living within the thick odd-smelling folds. Amazingly, it had a second even smaller specimen living within its aperture. Quite how this interaction came to be, or indeed what type of interaction this was, is unclear. Perhaps it was simply an extraordinary coincidence. There is no reason to suggest that *Maurea* species are cannibalistic and the smaller of the two shells is certain not to have reached reproductive maturity. Several tantalizing fragments and one complete, albeit tatty, sub-adult specimen of *M. penniketi* (B.A. Marshall, 1995) were also present, but fresh samples of this rare species were to elude us on this expedition.

The irregularly shaped and wondrously coloured ovulid *Pedicularia pacifica* Pease, 1865 was quite common attached to the two stylasteran coral species in the sample, but excluding these together with the few *Maurea* specimens, few other molluscs were found. Even when the grit was sieved, precious few micromolluscs revealed themselves. This paucity of molluscs from such a spectacular station was quite surprising. Indeed, this held true for all the bryozoan and sponge dominated stations from both the Three Kings and northern Aupouri Peninsula.

Our next two tows were quite successful for molluscs, if not for the bryozoan team, who were still cooing as they picked through the buckets containing the spoils of station 12. We were sampling a sand bottom along the 100 m contour to the north of the Princes Islands. There, we got several solariellid species, of which the islands have quite a number. Among these were live *Solariella vera* (Powell, 1937), one of which had brooded young nestled within its umbilicus, *Archiminolia regalis* B.A. Marshall, 1999 and a dead-taken *S. luteola* (Powell, 1937). Other molluscs of note included several live -taken specimens of an elegant and moderately large, probably undescribed species of scaphopod, several dead specimens of the pelagic 'sea-butterfly' pteropod *Cavolinia tridentata* (Forsskål, 1775), a large but broken *Selastele onustum* (Odhner, 1924), a spectacular new species of *Amalda*, alas dead, as well as one nice but dead-taken specimen each of *Tenagodus maoria* (Powell, 1940), *Emarginula aff. striatula*, a finely sculptured *Tugali* species, a large *Mesoginella* species and a sub-adult *Maurea gibbsorum*.

By this time, we had moved out into the heart of the upwelling that gives the islands their cold ambient sea-temperature. The water was as cool as 18°C here, whereas, further offshore around the islands, the surface temperatures were in the low 20's. The sea looked as though it were boiling and, in places, the current exceeded eight knots. Even though we were several kilometres from shore, the sea was very calm, potentially due, in part, to the upwelling, and partially to us being in the lee of the islands. We turned the engines off to enjoy some birdwatching over lunch and so that Dennis Gordon could make a start on the identification (and preservation) of the bryozoans from station 12 – a task that is significantly easier when bryozoans are still living. We had been keeping these in seawater up until this point and to do so much longer might have led to a bryozoan revolt.

Eventually, we resumed our sampling. We tried a tow in shallow water on rocks using the smaller and more expendable dredge, hoping to snag some of the kelp-dwelling species like *Maurea jamiesoni* (B.A. Marshall, 1995) and *Micrelenchus burchorum* (B.A. Marshall, 1998), but all we got was a little tuft of a filamentous brown alga in which were several small bivalves that probably wished that we hadn't. We rounded out the day by attempting some deeper-water shots to the south of the islands. The deepest was in 250 metres of water, although sadly, this came up empty. We did get a remarkably good but dead-taken specimen of *Cominella necopinata* (Finlay, 1930), which is a very rare species restricted to the very northernmost part of New Zealand and now known to occur just off the Three Kings too. This species is frequently confused with the *youngi* form (taxonomic status unclear) of the common species, *C. quoyana* A. Adams, 1855 and the latter is often incorrectly featured in collections and publications as *C. necopinata*. Fewer than 10 genuine specimens of *C. necopinata* are known. With a very successful day behind us and inclement weather again closing in, we beat a hasty retreat, sailing into the evening bound for the slight shelter afforded by Hooper Point,

near Kapowairua at the eastern end of Spirits Bay.

March 18th. Sea moderate, wind E.

There is a shell collector's proverb that states: 'molluscs do not dredge themselves'. At least, there should be. In less than ideal conditions, we took several shots stretching from off Cape Reinga right across to North Cape itself and to the south, ranging in depth from 20-80 metres, and spanning the shallow margin of the benthic protected area (BPA) off Tom Bowling Bay. The BPA was put in place to protect the remarkable bryozoan and sponge gardens that occur there from a potential scallop fishery. We were hoping to get fresh samples of *Alcithoe davegibbsi* Hart, 1999 to examine its phylogenetic position next to *A. fusus* (Quoy & Gaimard, 1833) but this species eluded us. Instead, we took half a dozen extremely varied shots. The fine scale of substrate differences really struck us. A couple of stations came up full of sponges, in which we got *Maurea osbornei* (Powell, 1926), *Sigapatella terraenovae* Peile, 1924, *Monodilepas diemenensis* Finlay, 1930 and *Purpurocardia reinga* (Powell, 1933). One station came up full of scaphopods, which were presumably living in mud. The remaining stations came up either empty or with little more than sand and dead shell. One of these was of particular note, despite at first appearing to be a disappointment.

Where station 12 was the golden shot for the bryozoologists, station 23 was that for the mollusc team. 100 litres of sand was piled on the deck and at first appeared devoid of anything of interest. Dead *Tawera* valves were the only molluscs obvious and the growing swell made processing the spoil unpleasant. We set to it half-heartedly at first, that is, until a mature live-taken specimen of *Conasprella howelli* (Iredale, 1929) decided to show itself. Then another. Then, a third! This was an astounding 'eureka' moment. Conidae species are generally associated with tropical and sub-tropical rather than temperate faunas. As such, the continental shelf off mainland New Zealand has a very underwhelming two or three *Conus* species, depending on whether or not you consider an unusual specimen at Te Papa (M.059572) that was dredged off White Island (in the Bay of Plenty) to be *C. raoulensis* (Powell, 1958) or *C. howelli* (Iredale, 1929) - see: Marshall, 1981; Filmer, 2008.

Below:
***Conasprella howelli* (Iredale, 1929)**

The 'commonest' of the mainland species is *Conus lischkeanus* Weinkauff, 1875 (formerly known as *C. kermadecensis*), but this is something no New Zealand collector would describe as locally common. Although plentiful at the Kermadec Islands, perhaps as few as 30 specimens are known from the mainland. Station 23 added one to that number. *C. howelli* is much rarer still, with fewer than a dozen good specimens known. It is also restricted to northern New Zealand and south-eastern Australia, making it highly sought after by cone-specialist collectors worldwide. When word spread of our finding three of these cones, we were presented with some remarkably high offers from people wanting to purchase them. These were all turned down, however, and the specimens remain in New Zealand available for scientific study. Rarity is relative to sampling effort, and while it is probable that three *C. howelli* specimens in a single shot was fortuitous, the habitat and location were quite particular. This was an area, a depth and a bottom type that is seldom fished or dredged by either commercial or recreational boaties.

There were other amazing molluscs in that sample too. Several live-taken, large and pink specimens of *Monstrotyphis tangaroa* Houart & B.A. Marshall, 2012 slowly emerged from the sand, as did *Pascula palmeri* (Powell, 1967) and numerous beautiful and short-spined *Murexsul octogonus*. There were two *Taron albocostus* Ponder, 1968, dozens of a striking orange and black banded *Ataxocerithium* species that attained as much as 10 mm in height, a large

Austromitra species, several *Zeatrophon mortenseni caudatinus* (Finlay, 1930) and countless examples of the common but enjoyable to find *Roseaplagis rufozona* (A. Adams, 1853). Thence, we would steam through moderate seas through the night to again wake in the Cavalli Islands.

March 19th. Sea moderate, wind NE.

Our return journey was less notable. We attempted a few last shots in off the Cavalli Islands with mixed results and in unpleasant but manageable conditions. One tow came up full of living *Occulina* coral but no molluscs,

Below: *Monstrotyphis tangaroa* Houart & B. A. Marshall, 2012

another with gravel and dead shell, and yet another was empty. A nice but dead-taken *Nassarius aoteanus* Finlay, 1926 was our last find of note. Hamish and Kerry enjoyed walks along the beaches of the main island in the Cavalli group as well as on Urupukapuka Island in the Bay of Islands, where there were several North Island saddlebacks and a nice beached example of *Notocochlis cernica* (Jousseaume, 1874). Well pleased with the results of our cruise, and with hundreds of new samples in ethanol for DNA research, we sailed back into Gulf Harbour beaming.

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Things we do ....

Club members enjoying shells and discussion at meetings held at the homes of Dave Cowe (right, September 2019) and Vivienne and Clive Robertson (below, March 2019).

Fossils and oddities on display at a meeting hosted by club member Tony Tomlin (above, February 2019) and a club display catching the attention of visitors to the Miramar Library (left, February-March 2019).

Bruce Marshall

by Pat Lakeman

The end of August 2019 marked the end of Bruce's paid career at Museum of New Zealand Te Papa Tongarewa. Our editorial in this issue comments on the sorry circumstances in which that occurred. But those circumstances should not be allowed in any way to cloud Bruce's outstanding achievements to date.

Bruce has been researching and collecting since 1967. With characteristic precision, he can tell us that when he started at Te Papa, the National Collection of Mollusca comprised 49,722 registered lots of molluscs. Now there are 328,795 registered lots, of which Bruce identified 134,491 and databased 63,383. It is a world class collection, and an extraordinarily valuable resource for future work on New Zealand's molluscan fauna. In parallel, Bruce has developed the associated Mollusca research library to be the most comprehensive in the country.

Not everyone will know that in 1979 and 1981, Bruce developed and led the two largest oceanographic expeditions ever undertaken by Te Papa. 7276 collection lots and 9774 lots respectively were added across Te Papa's natural history collections, as a result. And in addition, Bruce has published a huge body of research, individually and with others. It was recently reported in national media that Bruce is "so renowned in his field he's had 23 species and six genera named after him … (and) has also published more than 120 scientific papers and described and named 451 new species – the highest in Te Papa's history."

Hardly surprising then that with support from his professional community both here and overseas, Bruce was awarded the degree of Doctor of Science from Victoria University of Wellington in 2012, when he was described to the University as "the leading authority on the taxonomy and systematics of living molluscs in New Zealand" who has "significantly enhanced our understanding of the diversity, systematics and biogeography of the malacofauna of the south-west Pacific" and whose research is "pioneering". More recently in 2018, Bruce was awarded a Lifetime Achievement Award from the Malacological Society of Australasia in 2018.

Wellington Shell Club has much to thank Bruce for, given his long support of our club over the years. He has been a judge at our shell shows, and an exacting one – often pointing out how we can raise the standards of our exhibits of New Zealand shells. He has regularly helped with *Cookia*, promptly making helpful corrections to our final drafts (though the remaining errors are always the responsibility of the editors). He has

promoted, and opened our eyes to, tl National Collection of Mollusca, by allowing members access to view it, and he has helped us with identification of our molluscan puzzles – always encouraging us to have a go ourselves first. For many years now I personally have been a volunteer working alongside Bruce for a few hours a week, and I find th depth of his knowledge astounding.

Bruce Marshall's work has been at the core of his life, and currently he continues to do good things at Te Papa in an unpaid capacity. As I wr he is a finalist for Wellingtonian of the Year 2019 in the Science and Technology category. We hope that he will complete a new manual of New Zealand Mollusca – so this tribute to his achievements may yet be incomplete!

Left, Bruce with the late Dave Gibbs & Ena Coucum at the NZ Shell Show in Wellington in 1995; right, Bruce collecting in earlier days; above right, at Te Papa, in recent times. Photos: Ena Coucum & Malacological Society of Australasia.

40 years of Waikawa-watching

by Ian Townsend

Yes, that's right. How the time goes! I first started to visit Waikawa Beach soon after moving to Levin in 1979. Visits continued on a regular and fairly frequent basis because it was only about half an hour away and seemed to be the most rewarding local beach to collect on.

Where the river does its final dash across the sand to the sea changes from time to time. It can be at the northern end of the beach or twist south, but it makes little difference to what may be washed up. We have seen the authorities try to confine it to one course without success. We have also seen it swallow 4WD vehicles when hungry (not ours!).

Some storms bring in hundreds of volutes; at other times there are scarcely any, but their place may be taken by *Semicassis pyrum* (Lamarck, 1822). I would be interested to know more about the natural habitat of these shells. And why does the volute *Alcithoe arabica* (Gmelin, 1791) sometimes plonk their eggs on the most diminutive of shells? No wonder they get beached before hatching. (Is that the right term? Do shell eggs "hatch"?)

Enough nonsense! Generally speaking, if there is a dark area of wood fragments visible on the beach that is a good place to look for interesting shells. I have kept lists of what I have seen on various trips, but that would make boring reading, so general observations may be better.

A wash up of bivalves can always be guaranteed. *Crassula aequilatera* (Deshayes, 1854) and *Dosinia anus* (Philippi, 1847) by the hundreds – but then if you are lucky an occasional *Ardeamya spenceri* (Suter, 1907) or *Serratina charlottae* (E. A. Smith, 1885) may be hiding. *Bartschicoma gaimardi* (Iredale, 1915) is more commonly seen. Some nice pairs of the *Gari* species show up from time to time and occasionally a not-too-worn *Bassina yatei* (Gray, 1835).

Amongst gastropods, *Semicassis pyrum* (Lamarck, 1822) and *Alcithoe arabica* (Gmelin, 1791) are regularly seen. Sometimes storms bring in hundreds of by-the-wind sailors and amongst them *Janthina exigua* Lamarck, 1816 and *J. globosa* Swainson, 1822. If you are having a bad day collecting sea shells, there is always the introduced land snail, *Xeroplexa intersecta* (Poiret, 1801) to be found in the sand dunes. Don't snort! They are quite neatly marked.

Waikawa Beach is a scenic spot but has never felt isolated, it is only about 6 km from the main highway. Of course there are more houses at the beach nowadays and more permanent residents. Over the years we have enjoyed collecting blackberries there but since last year they are all gone, progressively cleared away.

I was once thrilled to find *Coluzea spiralis* (A. Adams, 1856) – a rare find on this coast – even though it was a worn specimen. I always enjoy finding *Maurea selecta* (Dillwyn, 1817) and occasionally *M. pellucida* (Valenciennes, 1846). At the beach on 3 May 2019, Leita Chrystall, her eldest son Mark and I enjoyed a sunny, almost windless morning. Apart from the hundreds of *D. anus* was a group of 12 *M. selecta*, all within a 50 m stretch of beach, and all in good condition and full size. Who could resist them! There were also a few *A. arabica* of both the smooth and nodular forms, but they had decaying animals within them, so were left on the beach. Mark spotted a very nicely coloured olive shell. There was also a not very large *A. arabica*

Waikawa Beach looking south

Photograph by Tom Raven, Otaki Beach, New Zealand - tomraven@whitebuffalo.net

crammed with about 30 pink barnacles - *Notomegabalanus decorus* (Darwin, 1854) – opening and shutting their valves and making clicking noises.

At the "eleventh hour" of 25 May 2019 Jim Harding and I did what I thought would be a final (for this story) visit. There were millions of *D. anus* along most of the beach and if not them, their place was taken by *C. aequilatera*. There was also a generous scattering of *A. arabica* along the beach, many in good condition but we left them where they were because most were still inhabited by their owners. What surprised us was that in about one kilometre of the beach we collected 32 specimens of *M. selecta*. But there were very few helmet shells – *S. pyrum* – on this occasion.

And wait, there's more – for this story, my last visit was in fact on the weekend of 27 and 28 July, again with Jim Harding. On the Saturday there was plenty of washed up material evident, including wood chips, on the edge of the low tide.

Despite having to run back and forth to avoid getting our feet too wet, we claimed some nice empty *A. arabica* among the large numbers of fresh examples, which mostly had their animals still inside. Plenty of *S. pyrum* and *Cominella adspersa* (Bruguière, 1789) were also present, in many cases with animal intact. Among all this Jim found a partial, but unmistakeable, example of *Cirsotrema zelebori* (Dunker, 1866). This species is widely distributed in the New Zealand region but has seldom been reported from Waikawa Beach. Of course we returned to the beach next day, but how it had changed overnight! On Sunday the sand was largely bare but despite this, and to my delight, I found a good specimen of *Zeacolpus vittatus* (Hutton, 1873) which I now rate as my best Waikawa find.

Editors' pick

The strangely shaped and inflated *Myadora striata* (Quoy & Gaimard, 1835) on the left in each of the photos above was found by Jim Harding, washed up on Mount Maunganui ocean beach, opposite Moturiki Island (aka the blowhole), on 20 April 1998. It measures 45 mm x 40 mm. On the right in each photo is a more normal example.

Marfells Beach 2019

by Bev Elliott

18 March 2019 was the date of my first visit to Marfells Beach since the Kaikoura earthquake. Almost two and a half years … but with the shellfish ban still in place, and still no clarity as to whether "shellfish" includes dead shells, [Ed: Yes, Bev, it does.] there wasn't much incentive to go, until I was up that way mainly looking for birds. Like Kaikoura, the low tide at Marfells is much lower than it used to be. Unlike Kaikoura, with its almost shell-less beaches and barren rock platforms, Marfells has piles of dead shells washed ashore, far more than I have seen for many years, and also plenty of living creatures at low tide. And hundreds of great big luscious-looking mussels at Mussel Point; I wonder if we'll ever again be able to take 3 or 4 for a meal – or 150, the number in the Fisheries Regulations?!

The place where we used to get cut off at high tide probably never sees the high tide now. And a pretty good road has been constructed past it, where the quad bikes used to have to be eased gently over quite rugged rocks. Years ago there used to be dozens of quad bikes carrying lots of people, day after day, heading for Cape Campbell and beyond. Even if they didn't exceed their legal quota of pauas and crayfish, the sheer numbers of people and days involved must have taken a huge toll of sea creatures. There were no quad bikes on 18 March; I don't know why, as the fisheries closure doesn't include fish and crayfish, just "shellfish"- which is everything else - and particularly seaweed (alive or dead).

Camping away around the coast in past years, I was always assured of perfect peace and quiet at high tide, but now the traffic could get around there at any time. Meanwhile I've grown old, and can no longer carry enough gear for camping, plus the people who make the rules don't want vehicles parked in the parking area while their owners go for a long tramp. I'll probably never get to Cape Campbell again, so a special thank you to Wellington Shell Club for that last lovely trip there in August 2016, shortly before the earthquake.

Just past the campground there were piles of dead shells washed up, which continued around to Mussel Point and abruptly stopped. I didn't go further as the beach appeared to be washed bare beyond there. Mussel Point usually has quite a good variety of birds, but not this time. A flock of white-fronted terns on the furthest low tidal rocks, and very little else. In the afternoon I walked the other way, along to the old wharf and my favourite bird watching spot, where it was good to see about 100 each of black-fronted terns and pied stilts – but none of the rare migrant waders I was hoping for. I do hope the earthquake hasn't driven them all away.

The beach, which has been getting increasingly bare over the years, had enough things washed up to keep me alert and interested. A dead, white-flippered penguin, a *Maurea pellucida* (Valenciennes, 1846), a *Globisinum drewi* (Murdoch, 1899) and a *Trichosirius inornatus* (Hutton, 1873), which I have not seen there before. And the inevitable rubbish, but it was good to find a notice erected by a group of people who are taking care of the beach. It is very satisfying when I can be absent for weeks, months or in this case, years, and find when I do return that the

L to R: On the way to Mussel Point; Mussel Point; Cape Campbell viewed from Mussel Point.

rubbish is no more than it would have been when I was cleaning up regularly. My favourite piece of rubbish came from Marfells Beach some years ago – three notes in a bottle. Three teenage, school girl friends, one from Raumati, Wellington, one from Germany, and one from Sweden – and I have letters and photos from all three of them. You never know what you'll find washed up on a beach!

Footnote: One of the photographs accompanying this story is of a *Ranella australasia* (Perry, 1811) – a beautiful shell, but one mustn't say where, when or by whom it was found! If it's a 'shell' it might be ok, but if it's a 'shellfish' there could be a $100,000 fine for the lucky (?) finder who hasn't got a clue about our new rules. I borrowed it for one evening, cleaned off a wee bit of marine growth, gave it a flick of spirits of salts and a rub of Norm Douglas' emulsion, and a dab of glue in one tiny hole, and I hope the owner does not just chuck it away, as I think it is the best one I've ever seen.

Can you help confirm this find?

These are apparently unremarkable bubble shells - *Bulla quoyii* Gray, 1843. Our New Zealand checklist records its distribution as the Kermadec, Aupourian and Cookian regions: it is not endemic to New Zealand. Malaquias & Reid note that "This is a temperate species restricted to Australasia, occurring from the Abrolhos Islands on the west coast of Australia, all along the southern coast; in northern Tasmania and on the east coast as far north as Sydney and Newcastle. In New Zealand it is known from the northern parts of North Island. It is present in Lord Howe Island and Kermadec Islands."

Raven & Bracegirdle consider it common in Northland. The southernmost specimen in Te Papa's collection is reputedly from Mahia (Bruce Marshall says this requires confirmation).

These specimens, however, were found on the very high tide line, at Burdens Gate, Eastbourne, Wellington, by Vivienne Robertson i April 2010.

Where did they come from? Somebody's pocket? Are they a remnant of a transient population? Or might this species be getting established further south than their traditional range in New Zealand?

The likely answer is somebody's pocket - in which case there might be more from the same source! But help solve this mystery - go to Eastbourne and look for them, and let us know about any other finds/occurrences in the area.

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Living in Russell

by Jenny Raven

My previous trips to Russell in the Bay of Islands have generally been limited to a few days of frantic collecting in the short time I had. This year I became a resident of Russell after purchasing a holiday home there. Appropriately, my first visitor was a mollusc: one of the shell-less varieties came in through the open window after rain and was sliding down the bedroom wall before being found and returned to the garden.

My first month was generally restricted to work on household issues; however at the end of it I had a few shell finds and related activities to report on – my bathroom window ledge now supports a small collection of local shells, I saw a medium sized live *Tonna tankervillii* (Hanley, 1860) in a pool at Bland Bay and a live, encrusted *Charonia lampas* (Linnaeus, 1758) on a rock ledge at Long Beach. I noted orange *Cominella glandiformis* (Reeve, 1847) still living in the muddy pools between Toretore Island and the mainland, and was pleased to find a pink *Prototyphis eos* (Hutton, 1873) in shell sand at Opito Bay, Kerikeri along with broken pieces at two other beaches. I also met Heather, daughter of ex-Whangarei club member Isabel

Above: Tonna at Bland Bay.
Below: Opito Bay.

Rigden, living at Paihia, and club member Gary Cullum selling shells at the Kerikeri Saturday market. The Russell museum has me recorded as a shell contact and being a resident has led to meeting local people including some with fishing connections which may hopefully lead to shells in future.

My favourite beaches are still Taupiri and Bland Bays - these being within a 45 minute drive of Russell and both provide a pleasant walk on a sunny day. I was rewarded by a small wash up of shell sand on my final visit to Taupiri and a quick look through it has shown it to contain at least *Rissoina zonata* Suter, 1909, *Peculator hedleyi* (R. Murdoch, 1905), many marginellid specimens and a large fragment of *Pictobalcis articulata* (G.B. Sowerby I, 1834).

Hopefully future trips north will allow me to report on further finds. I have made some exciting finds in the Bay of Islands area in the past – notably some lovely examples in the Cymatiidae family along with such treats as *Isara carbonaria* (Swainson, 1822), *Bursa verrucosa* (G.B. Sowerby I, 1825), *Hydatina physis* (Linnaeus, 1758) and *Casmaria perryi* (Iredale, 1912). The islands are also interesting and I hope to get out there over summer. Finally, I note that Margaret Morley and Bruce Hayward, in their 1999 publication entitled "Inner shelf Mollusca of the Bay of Islands, New Zealand, and their depth distribution." (Records of the Auckland Museum 36: 119-138; www.researchgate.net/publication/256456019) record 551 mollusc species between Cape Brett and the southern side of the Kerikeri Purerua Peninsula - so I have plenty to look forward to.

Notes on NZ Collected Species

Turritriton labiosus

(W. Wood, 1828)

This is one of the smaller and less-frequently encountered Cymatiids, so it was a real thrill to find my first-ever good specimen - on the edge of a sandy pool at low tide at Paxton Point, Far North, July 2019. It is 21 mm long, and had a hermit crab in residence.

ANDREW SPURGEON

Flammulina zebra

(Le Guillou, 1842)

At Fendalton Reserve, Pinehaven, Upper Hutt in April 2019.

JASON PLAISTED

Pteria levitata

(Iredale, 1939)

At Middle Arch, Poor Knights Islands.

IRENE MIDDLETON

Nassarius spiratus
(A. Adams, 1852)

At Cape Rodney-Okakari Point (Goat Island) Marine Reserve, north of Auckland.

JAVIER COUPER

Maurea tigris
(Gmelin, 1791)

On Anchorina sponge east of Owhiro Bay Wellington. April 2019.

SARAH MILICICH

Ranella australasia
(Perry, 1811)

A number of these were observed in June 2019, huddled under a low ledge at low tide, at Matai Bay, Karikari Peninsula, Northland. They seemed to be guarding their eggs, as I kept an eye on them for about a week, and they remained under the same ledge the whole time.

ANDREW SPURGEON

Amalda australis
(G. B. Sowerby I, 1830)

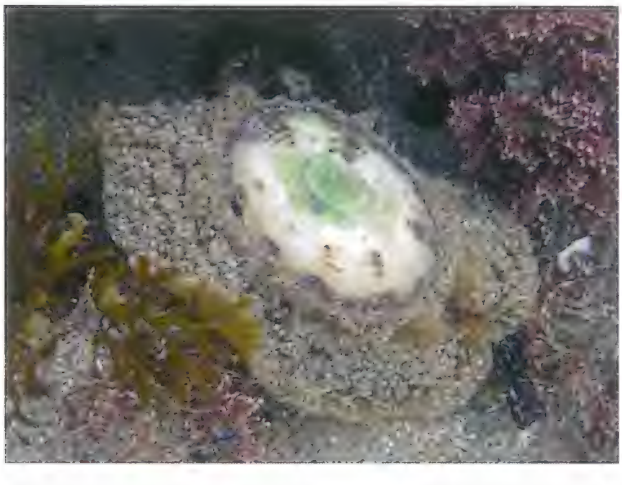
These very fresh, empty shells were found on the high tide line at Raumati South, Kapiti Coast, in March, 2019.

VIVIENNE ROBERTSON

Ceratosoma amoenum
(Cheeseman, 1886)

These beautiful little Nudibranchs were seen in shallow rock pools at low tide, Tapotupotu Bay, Far North. They were quite common over summer and measured about 20-25 mm in length.

ANDREW SPURGEON



Umbraculum umbraculum
(Lightfoot, 1786)

This slug, along with another about the same size, was seen in a deep gut below low tide at Matai Bay, Karikari Peninsula, Northland in June 2019. They are often very hard to spot, as the warty bodies merge in well with thei surroundings. Only the exposed shell on their back sometimes gives them away. The entire animal is about cm long.

ANDREW SPURGEON

Wainuia urnula
(Pfeiffer, 1855)

A mating pair spotted in bush near Levin, in November 2018.

JASON PLAISTED

Prototyphis eos
(Hutton, 1873)

Found in shell sand, Opito Bay, Kerikeri, Northland, in June 2019. Size 14 mm.

JENNY RAVEN

Agnewia tritoniformis
(Blainville, 1832)

This little Muricid was seen wandering over Corallina weed at low tide at Matai Bay, Karikari Peninsula, Northland back in April 2018. While not uncommon in Australia, they don't turn up very often here in NZ, so I was quite excited to stumble upon this shell.

ANDREW SPURGEON

Charonia lampas
(Linnaeus, 1758)

These large gastropods are always exciting to see wandering around alive at low tide. This one was in a shallow rock pool at Matai Bay, Karikari Peninsula, Northland in September 2018. I helped it back into deeper water after the photo-shoot.

ANDREW SPURGEON

Globisinum drewi (Murdoch, 1899)

by Kris Woods

In 1997 Gracie Davies, a longtime member of the Wellington Shell Club, passed away and I inherited her shell collection. Amongst her collection was a covered box of 10 beautiful and excellent quality *Globisinum drewi* (Murdoch, 1899). It took me several weeks to unpack and put Gracie's shells into my collection. To my horror, I could not find that box. It was gossamer light and I obviously threw it out, thinking it was empty!

For over 20 years I have searched the Kapiti beaches for a *G. drewi* to begin replacing Gracie's specimens. On 30 July 2019 I was collecting on the Waikanae side of the Waikanae River mouth and finally found my first, 26mm *G. drewi*. It had taken me 22

years to find my first specimen s wondered what the chances woul of finding another on the same da Nil, I concluded.

I left Waikanae Beach and resum collecting on the Paraparaumu si the river mouth. To my utter astonishment I found my second *Globisinum drewi*, albeit an incomplete specimen but still a G *drewi*. That was one collecting experience I will never forget.

In the aftermath of Cyclone Gita

by Pete Cresswell

The ravages of Cyclone Gita on 21 February 2018 were severe and widespread. A very ill wind to most who felt its effect, with widespread damage to many coastal areas. One, Rabbit Island in Nelson, suffered considerable loss of its foreshore roading, amenity structures and protective dunes. It was effectively out-of-bounds to everyone for a few days, but with the lifting of entry sanctions, club members in the vicinity wasted not the opportunity for some rewarding scavenging.

As is usual with strong, sustained onshore gales at Rabbit Island, a good washup can be almost guaranteed. Such species as *Offadesma angasi* (Crosse & P. Fischer, 1864), *Panopea zelandica* (Quoy & Gaimard, 1835), *Ardeamya spenceri* (Suter, 1907), *Zenatia acinaces* (Quoy & Gaimard, 1835) and *Resania lanceolata* Gray, 1853 are at the top of the list of desired finds. This visit was no exception – with all being collected. Even so, the gulls had been there first (there being no enforceable

restrictions on their movements) collects were disappointing in ter of sheer numbers of these choice species. Not so for the thousands examples of the more common Mactridae species, *Cyclomactra ovata, Spisula murchisoni and S. discors*, all in superb condition.

With climate change underway, t of these "conchologically produc events are likely. The downside i destruction of the foreshore and infrastructure.

Left to right: Rabbit Island, Nelson – showing extensive erosion following Cyclone Gita; Kerry Walton, Kevin Me Pete Cresswell working the beach at Rabbit Island; the extensive drift lines – tens of thousands of shell specime

Petone Beach ...

Petone, the esplanade & beach. Photo credit: Ulrich Lange, Bochum, Germany. https://commons.wikimedia.org

Over the years, issues of *Cookia* have rarely mentioned Petone Beach. In the club's Bulletin no. 11 (July 1968), Betty Wolf's brief report might well have forestalled others. She said

> "On Easter Monday of 15 April I went to Petone beach just east of the wharf. As usual I was disappointed. Never have I found anything worthwhile on that beach. Then coming home we stopped at the mid-west end of the beach and I had a wonderful find. Over a hundred *Macomona liliana* (Iredale) live, washed up during the hurricane on the Wednesday before Easter. The largest measured 68 mm x 55 mm. A few were a beautiful sunset colour inside. They must have washed up on a tide after the storm as they were below the very high tide mark."

That hurricane was ex-tropical Cyclone Giselle which affected all of New Zealand, inflicting high winds, heavy rain, flooding, landslips and high seas – and causing the interisland ferry "Wahine" to sink in Wellington Harbour, with the loss of 51 lives.

In 2003, in *Cookia* volume 14 "Special issue: The Wellington Shell Club Lists", Jenny Raven described Petone Beach as one of the best area for shells in Wellington's inner harbour, saying:

> "This beach has been much improved with the removal of heavy industry from the waterfront area. The Wellington City end of Petone Beach is the best area to find shell washhups. *Macomona liliana* are not uncommonly washed up here. After storms live *Oxyperas elongata* and *Cyclomactra tristis* have been cast ashore on the beach."

Judy Hardie's memories of Petone Beach span these two reports and more:

A Petone Beach ramble

by Judy Hardie

Having lived in the Hutt valley for seven decades plus, Petone Beach has always been a part of my life that was simply there. It was there for Boxing Day picnics in the 1940s, when the extended family would shelter in the sand hills for the traditional family "get together". Sandcastles were built, decorated with shells from the beach. Parents and uncles would go searching for flounder at dusk. Pipis would be gathered to boil or turn into fritters. A nice safe beach for swimming but even in summer the water was chilly. (The weather often as variable as it is today.)

Never a very "fashionable" beach, Petone was often drenched in the smell from outlet pipes from the freezing works – the blood stained the area around the pipes but the seagulls loved the bits that flowed out. The shell life must have flourished with the nutrients that settled on the sea floor there. The Hutt River washed down great areas of clay to stain the seafront in times of flooding – this too must have affected the sea life. There were great changes to Petone Beach after the freezing works closed

in 1981.

All that aside, my family have enjoyed going to a much cleaner beach in more recent years. Again shells would be collected and formed the beginnings of my collecting experiences. Trying to learn the names of the varieties found was always a goal for us. After joining Wellington Shell Club in the 1980s I tried to make a comprehensive collection of the varieties found there. My first memories were of vast wash-ups of *Macomona liliana* (Iredale, 1915) and *Bartschicoma gaimardi* (Iredale, 1915) (I still have difficulty in differentiating between the two). At the rocky end of the beach (the western end), *Lunella smaragda* (Gmelin, 1791) could be found (the children love the 'cat's eye' operculums) along with *Cominella glandiformis* (Reeve, 1847), *C. virgata* H. Adams & A. Adams, 1853 and *Coelotrochus tiaratus* (Quoy & Gaimard, 1834). At the eastern end of the beach – closer to the mouth of the river – large wash-ups of *Amphibola crenata* (Gmelin, 1791) were found. *Sigapatella novaezelandiae* (Lesson, 1831) were occasional finds as were *Cominella adspersa* (Bruguière, 1789). There were vast areas of Mytilidae along the pillars of the wharf – both the small black mussel *Xenostrobus pulex* (Lamarck, 1819) and the larger blue mussel *Mytilus galloprovincialis* Lamarck, 1819. Large shells of the green mussel *Perna canaliculus* (Gmelin, 1791) were common finds, often tangled with the large seaweeds after storms.

These are just some examples of my finds. Over the years my Petone Beach collection has become integrated with the wider collection of shells in my cabinets. In more recent walks along the beach I have not noticed the same quantities of shells washed up and those that are, do not appear to be so varied. Nowadays the beach is becoming more 'upmarket' with parking areas and walkways developed. Nothing though can change the magnificent view to the south over the harbour – sparkling on fine winter mornings – cold and frosty but brilliant in the sunshine.

The stormy days when waves break over the rocks and trains, as people travel to work travel beside this wonderful harbour bring thoughts o the shells (and seaweed for the garden) that will be on Petone Beac the next day. I have lived alongside this wonderful harbour nearly all m life and I treasure this beach for wh it is. Its shell finds may not be as exciting as those found in some oth places but are every bit as interestin It is a special place to be – where el can you see all the way to the Antarctic (even while feeling its chill). Take time to spend a day the and explore from one end to the other!

Fair-weather days at Petone Beach ... photos by Judy Hardie.

Vivienne Robertson has explored Petone Beach in detail, over the last ten years:

A decade of Petone Beach

by Vivienne Robertson

For the past 4 years I have been disappointed that Petone Beach has not been the novice shell collector's dream that it used to be for me. My interest in shells was re-awakened, later in life, from my training college days. I hadn't been a member of a shell club and good books were hard to find, so identifying shells was difficult for me. Fortunately I saw a shell exhibition advertised – just what I needed! There I was able to buy a copy of *New Zealand Seashells – a Visual Guide* by Jenny Raven and Selwyn Bracegirdle, but also to have my eyes really opened to the wide variety of beautiful shells. My collection, although building, was very small. Since joining the club I have learned about collecting, recording, cleaning and storing of my treasures – thank you to all who have helped me. But – back to Petone Beach!

From 2009 Clive and I had been regular walkers – sometimes three times a week - along the Petone foreshore, covering the different stretches, from the car park near the Hutt Road to the wharf, the kiosk at the eastern end to the wharf, or the kiosk to the Hutt River. Different shells were found within these three stretches. Somewhat to the annoyance and frustration of husband and our four-legged family member, they would find I had lagged behind, due to my frequent stops to pick up shells or getting down on my knees to sort through a patch of shells.

Although at the western end there was a black deposit of sawdust-like material on the water's edge up as far as a stormwater outlet, it did not prevent numerous shells being washed in and deposited up the beach. Sadly today this debris is usually a much denser layer that stretches all the way to the wharf, and some distance up the sand. Fewer shells are to be found in this area now, and certainly not the variety. I have listed the shells that I used to find here, but rarely see nowadays.

It puzzles me that the number, size and variety of shells along Petone Beach has dwindled so greatly.

Having said that, on Sunday 19 May 2019 a walk from the kiosk to the Hutt River was the most rewarding in many years. Many of the shells to be seen were small and not in the numbers I used to come across, but still much better than for the past few years. I came away with a nice *Phenatoma rosea* (Quoy & Gaimard, 1833) – a good morning out!

Haliotis australis Gmelin, 1791
Haliotis iris Gmelin, 1791
Cantharidus opalus (Martyn, 1784)
Coelotrochus tiaratus (Quoy & Gaimard, 1834)
Coelotrochus viridis (Gmelin, 1791)
Micrelenchus purpureus (Gmelin, 1791)
Diloma aridum (Finlay, 1926)
Diloma bicanaliculatum (Dunker, 1844)
Diloma subrostratum (Gray, 1835)
Cookia sulcata (Lightfoot, 1786)
Lunella smaragda (Gmelin, 1791)
Zeacumantus lutulentus (Kiener, 1841)
Maoricolpus roseus (Quoy & Gaimard, 1834)
Maoricrypta sodalis B. A. Marshall, 2003
Haustrum lacunosum (Bruguière, 1789)
Xymene plebeius (Hutton, 1873)
Zeatrophon ambiguus (Philippi, 1844) (good-sized)
Penion sulcatus (Lamarck, 1816)
Solemya parkinsonii E. A. Smith, 1874
Myadora striata (Quoy & Gaimard, 1835)
Gari stangeri (Gray, 1843)
Hiatula siliquens (Willan, 1993)
Cyclomactra tristis (Deshayes, 1854)
Dosinia anus (Philippi, 1847)
Dosinia subrosea (Gray, 1835)
Tawera spissa (Deshayes, 1835)

A day on a boat

by Kerry Walton

Coastal Otago teems with life. Seabirds of two dozen species soar with every gust. Fur-seals, sealions and penguins are a constant tripping hazard, and the subtidal mollusc fauna is surprisingly diverse. As a new resident to the region in 2018, I was eagerly anticipating an opportunity to get out on the shelf edge for some dredging and excitedly hitched a ride on what was ostensibly a bryozoan collecting daytrip. The RV *Polaris II*, of the University of Otago's Marine Science Department, is an endearing old wooden vessel some 21 metres in length. She is taken to the Auckland Islands every year to observe the Southern Right Whales' breeding season, although the effort pushes her to her very limits. That is not a voyage I will be volunteering for, as much as I wish to visit those islands! On 10 November 2018, however, the morning dawned calm and clear.

We set out at first light, encountering our first dolphins as we cleared the entrance to Otago Harbour and the first of many albatrosses soon after. There was no chop, and the swell was of less than a metre. The plan was to attempt a dozen 'shots' ranging from about 50 to 130 metres in water depth and we achieved almost that number, roughly forming two transects out to the rim of the Papanui Canyon. What struck me was the variation of the bottom types across relatively short distances. We were in an area known to have beds of bryozoans, but each tow produced a unique set of organisms.

Clockwise from top left: Lighthou at Otago Heads; *Pelseneeria bountyensis* (Eulimidae) on echinoderm; *Comitas trailli*; sma rare things from 131 metres; a *Penion chathamensis*, two *Fusitriton laudandus* and a *Buccinulum pertinax finlayi*; two photos of the dredge working; R' Polaris II.

Several tows were dominated by locally extinct species, such as *Stiracolpus symmetricus* (Hutton, 1873) (which may still live inshore), *Neilo annectens* Powell, 1931 and the surprisingly large *Tawera phenax* (Finlay, 1930), which were mainly found in sandy areas with few living species present. Other stations were full of bryozoans and shell hash, in which were found several *Maurea* species as well as innumerable live juvenile *Zygochlamys delicatula* (Hutton, 1873). Other stations appeared at first depauperate, but therein lay the real treasures: live muricids including *Zeatrophon pulcherrimus* Finlay, 1930 and several *Comptella* species; *Monodilepas monilifera* (Hutton, 1873), several *Splendrillia* species, *Euthrenopsis otagoensis* Powell, 1929, *Comitas trailli* (Hutton, 1873), *Escalima regularis* Powell, 1955 and an echinoid with parasitic eulimids attached to the ventral surface that appeared to be *Pelseneeria bountyensis* (Powell, 1933).

It was a most enjoyable day out and resulted in a considerable number of interesting and important invertebrate lots that are available for genetic work. I hope it was a day I will be repeating soon!

There is always a story behind a shell

by Kris Woods

There were hundreds of shells up for grabs in the silent auctions at the Conchologists of America (COA) Annual Convention which I attended in Key West, Florida in April 2017. I was not surprised to see species from a wide range of Mollusca families but I was particularly surprised and pleased to find a range of very good quality New Zealand Calliostomatidae species, including single specimens of *Maurea granti* Powell, 1931, *M. foveauxana* (Dell, 1950) and *M. pellucida* (Valenciennes, 1846). Fortunately all three had good collection data. I thought these shells should return to New Zealand and my bids were successful. These shells are now part of my collection.

On 28 March 2019 I posted a photo of my beautiful *M. pellucida* on the Wellington Shell Club Facebook page and included where this shell was collected. I omitted the collection date on Facebook, although I knew the month and the year. Andrew Spurgeon commented on the photo asking for the collection date. When I provided him with this he asked if the

shell had come from Peter Jamieson's collection. Peter was a member and past president of the Wellington Shell Club until he passed away in 1995. Peter's name was not on the label but when I informed Andrew that it was marked "The Abbey Specimen Shells" he was able to complete the collecting picture for me.

In 1993 Andrew and Peter were on a collecting trip in Northland. On 2 November Andrew was diving at Paua, Parengarenga Harbour. He found a number of *M. pellucida* at 4 to 6 metres depth off Paua wharf on old pilings and gave some of these to Peter. Andrew informed me that Peter was dealing with "The Abbey Specimen Shells" at the time and that is where this shell ended up. "The Abbey Specimen Shells" was a business established in California during the 1980s by two passionate collectors of high end shells. The founders have since passed away and the business dissolved. Thanks to Andrew for recognising the shell on Facebook: I now have an accurate collection date, the name of the collector, along with an intriguing story. I have yet to discover the rest of the story after it was acquired by "The Abbey Specimen Shells". Where has it been since the mid 1990s and who donated it to the convention?

New Zealand Shell Show 2018

by Kris Woods, David Cowe, Vivienne Robertson & Jenny Raven

Kris:

What better opportunity is there to display shells to the wider community than to exhibit them in a shell show? With our last shell show being held 3 years previously, the New Zealand Shell Show 2018, hosted by the Wellington Shell Club, was the most recent opportunity for me to exhibit a number of displays featuring both worldwide and New Zealand shells. One of my displays showcased nine New Zealand *Maurea* species from the Calliostomatidae family.

Calliostomatidae occur worldwide, with the largest species *Maurea tigris* (Gmelin, 1791) endemic to New Zealand. I have developed a particular affection for this family because five of its members, *M. pellucida* (Valenciennes, 1846), *M. punctulata* (Martyn, 1784), *M. selecta* (Dillwyn, 1817), *M. tigris* and *M. waikanae* (W.R.B. Oliver, 1926) are found washed up on the beautiful beaches of the Kāpiti Coast. This area is only a 45 minute drive north from Wellington.

David:

When I had been a member of the Wellington Shell Club a long time ago, there had not been any organised shell shows. I was aware of more recent shows through the club website but had not been to one, so I wasn't sure what to expect.

I thought the whole show was very well done - and an eye opener, to recognise the effort exhibitors put into their individual displays, whether of a shell family or a theme. I was most impressed with the imaginative layouts and methods of display: I can still recall some of the exhibits and methods of exhibiting.

Another subject very new to me were the sales tables (those capitalist swine) which are good, I feel, as they can offer difficult to collect items. One thing that has changed for me is the availability of those shells that were considered extremely rare in my collecting days – and now are available possibly due to divers or commercial fishing.

A further highlight was a very nice cup of instant coffee with an amazing piece of home baked fudge cake (I sneaked a second piece). I do have a sense of frustration - I wish somehow the show entries could have been exposed more to the public, in some venue or press or magazine, they deserve.

Vivienne:

I found it a wonderful atmosphere, like a friendly family everyone so relaxed! The friendliness and generosity of club members manning the sales tables is something tha really stood out for me. These members were really informative and enthusiastic about their hobby and keer

Top, the main hall; above, Alan Beu & Eric Scott proba discussing fossils, alongside Pete & Dee Cresswell below, there was time and space to relax occasionall Photos by Jason Plaisted & Pat Lakeman

give encouragement to others just starting to pursue their interest.

Jenny:

The shell show for me - as chair of the organising committee - started long before anyone else - at least one year before. There was work involved in deciding, yes, we would hold a show and then a year of organising. I was lucky to have good support, particularly from Kris and Roger Woods and Jill Burnet but we were a little thin on the ground. At least we had most of the documents we needed on the computer from previous shows.

"Keep it simple" everyone said but we did want this to be a good show. We added some new touches – a social "meet and greet" function on the Friday night, on site caterers for the club dinner, and a silent auction along with the usual open auction and sale and trade tables. We were using an untried venue over three adjoining rooms – our previous venue no longer being available, hopefully it would all work. All too quickly the months of organisation ticked by and everything fell into place. We had a good number of registrations and exhibits – unfortunately none from out of New Zealand but at least we had a show and shells to show the public.

Looking back it achieved what we wanted - although the public numbers were down, the venue more than performed for the exhibitors and those who attended. There was a wonderful array of shells on display, all the social functions went well, and we gained one new club member. And we brought together in one place, most of New Zealand's shell collectors and shell experts to enjoy the experience. Many thanks to the numerous helpers who offered their services over the weekend - maybe we'll have another!

Lessons from participating in my first shell show

by Jason Plaisted

I thought that this article may help those who are new to the shell show scene and those considering giving it a go in the future. It may help you to avoid the pitfalls I experienced, or at least help you to be aware of them. It may also help you to see, if you haven't already, the joy that comes from taking part in a show, or perhaps in taking part once again.

Time, tide and shell show wait for no-one … the first thing that I underestimated was just how long everything takes to get ready. It really was my own fault though. Eager and unseasoned, I had signed up for a lot of categories. I could have taken a much simpler path, but I had now bitten off this large chunk and I was set on masticating it until the very end! It was helpful to have an idea of an end result to aim for, having attended as a spectator at two shell shows before participating in the 2018 New Zealand Shell Show in Wellington. I set out to try and accomplish my vision for my entries.

Selecting the shells and deciding which category to best place them in was no short task. Often it was a difficult decision as to which category to best place a shell, as at times a shell could work well in any of two or more categories. After that, determining how to go about building and constructing my display cases was the next big task. Again, I could have quite easily used more of the cases already provided to me by the always generous Pat Lakeman. But I decided to construct a great deal of my display cases and, in my head, I thought it would be a relatively small task. Assumptions … you know what they say about them.

Before I knew it, the due date had arrived and I had to submit the dimensions of my cases. This was necessary so that the event planners could budget for space to make sure everyone's displays were all on tables and not on the floor, on a chair, or out in the stairwell. Fair enough and sound planning from the event management team. My planning phase came abruptly to an end soon after I looked at the date and time and I hurried to place my shells on the carpet and measured up approximate dimensions for them to all fit. I submitted my dimensions, hoping they would work out by the time they were built and all the shells and labels were inside. Designing the cases, the sourcing of raw materials and the labour involved in building them,

cutting perspex covers and making closing and opening hinges – again, all took more time than I anticipated. Up until this point I had done only a relatively small amount of woodwork in my life, but I enjoyed the chance to build something like this. It gave me an excuse to go out and buy a sander and an electric power drill. These are tools that Wellington renters often don't use lest they incur the wrath of a property manager or property owner.

It gave me a good sense of accomplishment when the last coat of varnish had dried and I could finally place the shells inside the finished display cases. It also gave me a newfound respect for all those impressively crafted, purpose-built display cases I had seen at past shell shows. The ones with 'dove tail' or 'tongue and groove' joints, slide-in glass panes and ingenious designs to showcase the splendour of the shells that would adorn the insides. I would come to see more of these beauties in the 2018 show.

Next up was creating the diagrams, text and labels. Labels, in theory, sounded like a relatively short task, however, again … I was mistaken. Maybe it was because I was in the final week and final days in the lead up to the shell show when I was creating the labels, but researching and creating the labels all seemed to take a very long time. However, it was educational and I think before the display cases even came into contact with the tables which they would call home for the duration of the shell show, I had already learnt a great deal more about shells than I had before starting down this journey.

From top: Jason chiselling (photo by Tony Tomlin); a painstakingly chiselled out and cleaned fossil; Jason's display of Wairarapa fossils.

As it stands and if I am honest, I an guilty of collecting shells in probab an all too simplistic way. Usually writing a quick label with the date, location, name(s) of the collector a habitat for example, placing the lab and shells into a ziplock bag and firing (gently placing) it into a box be looked upon on a rainy day. But often have not written on the label what species it is. If I am certain of what it is then it usually gets a nam on the label, but then sometimes I don't have a name on there whatsoever - even if I do know wh it is. The way I had looked at it wa is actually the least important piec information on the label. An exper will pick up this shell and identify by looking at it and not by looking what name I think it is. However, they would find most of the other information on my label a lot mor useful. A dangerous practice perh but it did also mean that now I hac not only find shells that I wanted t display, but sort through and actua identify them in order to make the labels for their display cases. This would prove costly in terms of the currency known as time.

Perhaps this is a good point to mention how valuable it is to hav database and the value in having labels and a good storage system. example, if you wanted to do a se for shells of the Wellington regio you could sort or search your database for this region, find the in the database, look up if it's a specimen of good condition, look the information pertaining to whi container it is stored in and go ab immediately finding it. This wou have been such a time saver if I h had the foresight and work ethic

enter a lot more entries into my database and had created a sound label and storage system. These are my now my ideal collection goals for the future.

In creating the labels, the fossils I had recently collected before the show for the purpose of one category, proved to be the most problematic for me. Having previously had very few shell fossils in my collection, I was a novice to say the least when it came to identifying them. Reference material for these fossils was old and largely outdated and there was little time for me to seek out the wisdom of academics who are wise with the current taxonomy. After acquiring some old reference books and asking those who were kind enough to assist, I created the final labels and took my best stab at the rest. No doubt costly in terms of points.

I had had a great deal of fun travelling out to the Wairarapa collecting the fossils with Tony Tomlin, mainly for the purpose of creating an exhibit for the shell show. Experiencing the excitement of finding a fossil just peeking out of the hard substrate and then starting the precarious task of chiselling out the fossils from their embedded position was one that I think you need to experience to fully understand. The fossils are prone to cracking and breaking. I felt a bit like a bull tip-toeing around a fine china shop as I smashed the hammer head, striking the cold chisel, hoping that each strike would come closer to prying the fossil out but simultaneously hoping that the strike wouldn't break it. My failure and success rate with regards to breakages falls largely on the failure side, but then I guess that is what makes it all that more rewarding when you do get a good specimen in nice condition. After just collecting for one full day I began to see the value and time that must have gone into the impressive fossil shell collections of Tony Tomlin and fossil category prize winner at the show, Eric Scott. Their collections are aspiration-worthy and I'm sure I will come to learn a great deal more from them in regard to fossils if I keep up the interest in this area of shelling.

Returning to the subject of labels, something of great importance I learnt from entering the shell show was a lesson at the final minute before pencils down. Only when I had the labels all created and placed next to their respective shells, inside their cases and sat on the bench inside the exhibition hall did I get some eleventh hour council. I asked our lovely Pat Lakeman if she would mind taking a look at my display, and one thing she immediately told me was that she thought I had most likely made a mistake with my labels on my Haliotidae display. On all my labels I had placed the authority (the original author's name and the date of publication) in parenthesis. Apparently, as she went on to explain, if the original name is changed then the authority is placed in parenthesis, but if the original name is unchanged (or is reverted to after a change), then no parenthesis is used. Pat mentioned that incorrect presence or absence of parentheses around an author could mean that points are deducted. [Ed: see footnote.] It was something I thanked her for, because it was not something I was aware of and when I checked, it wasn't mentioned in the marking criteria. The lesson here I guess is afford yourself enough time to take your finished displays to a friendly, experienced shell show exhibitor and ask for their feedback. Factor in enough time to make adjustments. Most likely they will be operating at a completely different level to you if you are asking for their help and you wouldn't be directly competing against them even if you are entering the same categories. So they should be willing to help, as I'm sure we all are.

After confessing to Pat that actually, in fact, every single one of my labels in all my displays had the author placed in parenthesis, I chalked it up to experience. I considered that it was a lucky catch that Pat picked up on my error and told me about it so that I could learn from my mistake. I wondered what else perhaps I had done wrong without realising, and thought how I would have liked to have seen a feedback or marking sheet on my displays from the judges. This would tell me where my displays did well and where they needed improving for next time. However, I do realise that it could also create problems should people not agree with the judges' comments and I'm sure it would make the judges' job a more labour intensive and time consuming one. But I would find it more useful than harmful, and after all … the judge's decision is final.

Another lesson that I want to share is what happened after the shell show. Luckily, I had the foresight to take photos of all the shells I had entered into the show and I took a photo of them alongside the bag they belonged to. This meant that I could marry them back up with their correct label and place them back into the same lot

they came out of. However, I did not have the foresight to put all of the bags or lots which I had taken a shell out of, into one consolidated area. I had foolishly left these bags and lots back with all the other lots and shells. It was a long process to dig out and find the right bag/lot and then match it up with the photos I had taken. In hindsight, it would have saved me many hours of work if I had still taken the photos, but placed all the bags together for easy pairing after the show. You live and learn though and the most important thing was that I did still manage to marry each shell back to its correct label and lot.

When I reflect back on the show, there was a nice calming effect that washed over me when the final minute for entries ticked by. It was then too late to make any changes, all displays had to be placed on the display tables and it meant that there was now nothing left to do but let the judges do their thing. I could now peruse the many amazing shells and their displays, marvel at the effort that had gone into making them on a completely new level that came with creating entries of my own, and enjoy the excellent company of all the like-minded people who had travelled from far and wide to congregate at the shell show.

There was always something to do at the show and it seemed to pass by so quickly. I know that others, like me, felt a very real sense of sadness when it all had to come to an end. It is a great deal of work for organisers, and I am very grateful to all those who made it possible. Without their efforts, it simply would not have happened. As a relatively new member to the Wellington Shell Cl and a very new competing participa in the shell show, I hope we see on again in Wellington and others around the country in the years to come. Not just to compete for the chance to win some glory, but I would say more than anything, to provide a platform to meet all the wonderful people that make our community so great and drive our interests in molluscs even further.

Footnote: Pat had sooo much sympathy for Jason's mistake. Her very first, lovely display of Haliotic at a shell show ("one of the best displays in the room" Bruce Marsh had kindly told her) – lost a point (and thereby any chance to win) fo the very same error!

Left: A selection of the amazing exhibits on display at the show; Above: The winning entry for "She of the Show", by Kris Woods. Photos by Jason Plaisted.

Australian Shell Show 2019

by Kris Woods

For a good number of years New Zealanders have been attending national and club shell shows in Australia. We enjoy participating competitively and the shows are an opportunity to make new friends and catch up with old ones. The 14th Australian Shell Show 2019 was hosted by the Malacological Society of South Australia (MSSA) in Adelaide. If I had to describe the show in just one word it would be "fun".

L to R: Kris Woods, Jenny Raven & Heather Smith

Jenny Raven, Heather Smith and I were the only New Zealanders attending the show. We all competed and all won firsts. This was gratifying although what I will most remember from this very successful event was the friendliness shown to us and the social networking we enjoyed. I have attended many shell show award ceremonies but the light-hearted yet serious-at-the-same-time approach from presenters Mike Burrell (President, MSSA) and Simon Barbour (Member, MSSA) made this presentation most entertaining. Mike ran a shell quiz during the awards dinner. This quiz was challenging but it was a good way of getting people to mix and have fun together.

After the weekend we New Zealanders spent a delightful day with MSSA member Peter Hunt. We were taken to the Fleurieu Peninsula, near Adelaide. The trip started with some bird-watching at the Serafino Winery which is in McLaren Vale, a well-known wine-growing region about 45 minutes south of Adelaide. We then called in at the d'Arenberg Winery where we whole-heartedly enjoyed sampling some of their excellent wines. The next stop was Lady Bay Beach for shell collecting, by which time it was mid-afternoon and soon time to return. Many thanks to Peter for being so generous with his time.

Back in Adelaide we collected Peter's wife Brenda from her work and made our way into the Adelaide Hills for a genuine Australian bush barbeque hosted at the home of Jane and Simon Barbour. This relaxing and casual function in a stunning bush setting was a fitting end to a successful 14th Australian Shell Show 2019.

Keppel Bay Shell Show 2019

by Pat Lakeman

On past occasions I have travelled to the Keppel Bay Shell Show direct from Wellington, but this time I was already in Australia with my family in southern Queensland. So when I got there I was used to the sunshine, but the beauty of the Capricorn Coast is hard to match. People come from far and wide for this show and it is worth it. This year the Australasian shell family was well and widely represented, with Heather Smith, Jenny Raven, Kris and Roger Woods, Mike and Val Hart and myself there from New Zealand.

I stayed at Ena Coucum's comfy home, along with Heather and Jenny. Set up of exhibits and dealers' sales tables occurs on Friday afternoon, with judging on the Friday evening. The show was open to the public on Saturday and Sunday, with club members' sales on Sunday morning and everything being taken down again on Sunday afternoon – pretty similar to the way we have run most shell shows in New Zealand. But this was Keppel Bay's 52nd annual shell show, a phenomenal track record, and yet again they rolled out an excellent and most enjoyable event.

There were many splendid exhibits with some truly gob-smacking shells. There were a range of dealers and sales tables selling shells and other interesting things. The club sales table at the Keppel Bay Show is legendary – many more shells than they can put out at once, despite having a huge square of sales tables with most of the trays of shells sorted by shell family. Very reasonable prices, so much to look at, and more shells put out as trays get emptied by keen buyers. An enormous amount of work is put in by the volunteers who sort, identify, bag, label and price shells – it was the very least we visitors could do to buy them, and in a trice my wobbly resolution (to not take home any more shells than I came with) went right out the window, as I sat down next to a jam-packed box of cassids.

We kiwis "took home" some trophies too (not literally, and thank heavens, because most of them are huge). I was very pleased that my Cassidae display was a winner; Kris had two wins and Heather deservedly had a clutch of them – at the prizegiving dinner on Saturday evening she had no chance of holding all five trophies at once. And it wasn't until the prizegiving that we learnt that Kris had won the prestigious Conchologists of America Award, a great thrill for her.

Sunday started with club members' sales tables at 9am and later I went for a walk to the local shopping plaza. I thought that might be safer … back at the show, Merv Cooper had a truly enormous, and very good quality, *Cassis madagascariensis* Lamarck, 1822 for sale. I don't have a good specimen in my collection and I was very tempted - which I am sure Merv knew! I resisted, but with difficulty.

On Sunday afternoon we took down our displays and said our goodbyes. A group of us had a meal at a local restaurant that evening, and when we got back to Ena's, New Zealand and England had started to play cricket. Packing up for my next-day departure lost out to the ever-increasing tension of the Cricket World Cup final. Ena sensibly went to bed but after a short sleep at the start of the second innings, Jenny and Heather and I were quickly back in front of the screen to watch through to the end the best cricket match I have ever seen. And in just one respect, the worst – but despite New Zealand's marginal loss I wouldn't have miss it. Tired next day? – you bet, but sc worth it! Being up half the night scrambled my brain though: at the l stop on Monday I realised I had lef my mobile phone on Ena's kitchen table. Adrenalin kicked in, I made a call to Heather from the shop acros the road and she, with Jenny, made emergency dash to reunite me with my phone – and I was still in time t catch the airport bus, which luckily was running late. I won't state the obvious about separation anxiety (b thank you again, Heather and Jenny

There was no other anxiety that weekend though – it was so enjoyab to visit Yeppoon again, to be overwhelmed and delighted by shel and to talk to so many lovely shell people. I highly recommend it, if yo get a chance to go.

L to R: Pat Lakeman; one of Heather Smith's prize-winning displays; Kris Woods with her COA Award.

Cowries from unexpected places

by Bert van Tiggele

Some years ago I was collecting fossil shells at a beach in The Netherlands, called De Kaloot in the province of Zeeland. This beach is famous as a source of Pliocene marine fossil shells, mostly of about 2 million years ago. Oddly, on that day I found a number of recent-looking cowrie shells: *Monetaria moneta* (Linnaeus, 1758), length about 21 mm, width about 16 mm.

***Monetaria moneta* Linnaeus, 1758 from De Kaloot, Ned.**

How was it possible that these tropical shells were washing up on the beach of a cold water area in the Northern hemisphere? The answer lays in the rich history of the Dutch trading company, the VOC (Dutch East India Company) and from its wrecked sailing ships, close to De Kaloot.

In the 17th and 18th centuries the VOC ships brought these cowries (family Cypraeidae) to The Netherlands as cargo. The VOC was trading at that time with countries in South East Asia such as India, the Maldives and Sri Lanka. From these countries it transported loads of cowries, to sell them to other companies in the Netherlands like the WIC (West Indisch company) and the MCC (Middelburgese Commerce Company). These companies bought slaves in African countries, using the cowries as money, and transferred the slaves to America and the West Indies. The tropical money shell *M. moneta* was a popular payment method at that time in Africa.

During the heyday of the slave trade, Amsterdam was the centre of the cowrie trade. Large storage sites were built for storing the shells. In 1738, a VOC ship called the Reigersbroek came back to The Netherlands from Sri Lanka via the Cape of Good Hope, with loads of cowries on board. Close to the Dutch coast, near De Kaloot, the ship foundered and sank, resulting in the death of 50 people. After more than 280 years, the cowries from this wreck, and possibly some others, are still washing up on the nearby beaches. My conclusion is that my shell finds are from the *Reigersbroek* and they are now in my shell collection in New Zealand.

A second unexpected shell find was in Nelson, New Zealand, last year. I was cultivating my small vegetable garden with some material from a bag of compost. In the mix of compost and soil I found yet another cowrie, this one *Monetaria annulus* (Linnaeus, 1758), length about 22 mm, width about 15 mm.

This shell was black and worn, had two little holes on both sides of the shell and looked as if it had been used as a bead. How did it come into my

***Monetaria annulus* (Linnaeus, 1758)**

compost material? Maybe this shell had come with a tourist from one of the Pacific Islands to New Zealand, like the shells of a necklace that was given to me, during my visit to Fiji in 2018. Again a shell from an unexpected place, now in my collection.

Necklace of cowries from Fiji

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iNaturalist NZ (Naturewatch NZ) – what the molluscs tell us

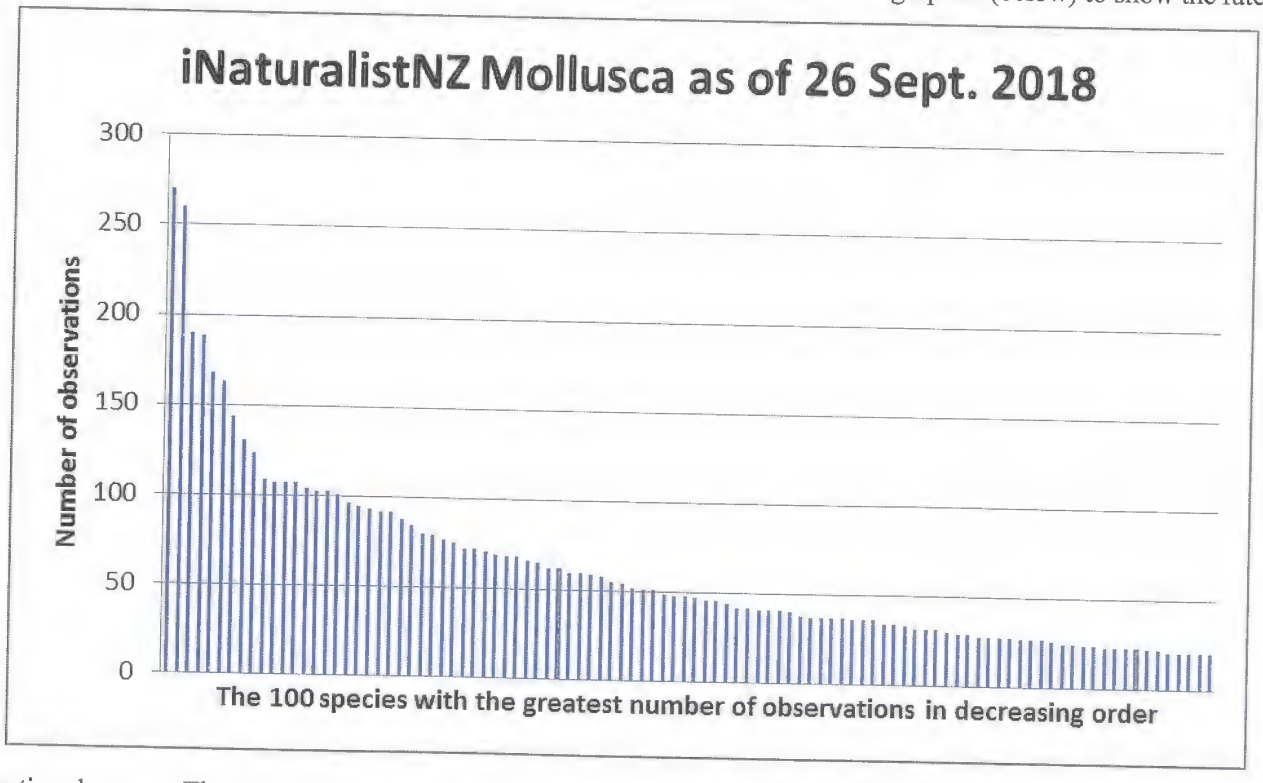
by Kerry Walton

iNaturalist NZ (previously known as Naturewatch NZ) is a web-based tool that is widely heralded as an excellent example of citizen science. In essence, it is a website-come-database where users can submit images of wildlife and help to identify the species in question. There is also a platform for discussion and comment as to why one might have suggested an identification (ID) or where additional information about the organism in question can be provided.

The data is easily searchable and characterized as of good or low quality on the basis of how many users have 'agreed' upon an ID. An unfortunate tendency of this process is that the first ID for any record tends to 'snowball' – that is, others rapidly 'agree' to get the record up to 'research grade' and to improve their own stats and figures. Fortunately, once a record is challenged, those who have commented or identified the record are notified and can amend their ID or further justify it so that, after a few weeks, most records have a reasonably sound ID. There are also administrators who streamline this process by highlighting abnormal records.

iNaturalist is a world-wide program covering all manner of flora and fauna. Through its use, non-scientists can have a species identified relatively easily and people can use the figures and maps to get an idea of what species look like and where they occur. For scientists, this can be an excellent way to detect new distribution records or follow the spread of an invasive species, although purported records are best backed up by voucher specimens in museum collections.

Within the platform, users can receive notifications about regions or taxon groups they are interested in. For example, one can request only to see Mollusca from New Zealand. When one indeed uses those constraints, as of 26 September 2018, there are 10,057 observations representing 632 taxa with records having been submitted by 777 people. Of these, I considered only the 100 species for which the most 'observations' i.e., records, were available. These are graphed (below) to show the rate of observation decrease. The curve of this graph is not especially surprising, although when one breaks down some of the traits of those 100 most reported species, there are a few interesting observations to make. The split between marine, terrestrial and freshwater species is not altogether surprising. It is worth noting that only two freshwater species (*Echyridella menziesii* (Gray, 1843), 27 observations and *Potamopyrgus*



antipodarum (Gray, 1843), 36 observations) made the top-100 list. Of the terrestrial species there was a reasonable split between introduced and native species, although here extreme numbers of one or two species (260 observations of the common garden snail, *Cornu aspersum* (O. F. Müller, 1774) for instance) will skew these figures. I was a little surprised by how well chitons were represented – perhaps because these are less well understood by collectors and are often lacking from shell books people are turning to this tool to identify them. In all, 19 New Zealand species were represented on iNaturalist NZ, eight of which made the top 100. Two octopus species make the top 100 (positions 56 and 62 corresponding to 42 observations of *Macroctopus maorum* (Hutton, 1880) and 37 observations of *Octopus tetricus* Gould, 1852 respectively) but *Spirula spirula* (Linnaeus, 1758) is the only cephalopod to make the top 20; one can imagine that establishing what created them would be of interest to any beachgoer who was unfamiliar with their little coiled shells.

I did not notice any locality records that significantly expanded the known distributions of any species during the course of this review, neither were there any images of species hitherto unrecorded from New Zealand, but this tool is likely to prove valuable to science in the future as more records are added. As it stands, it is already an excellent teaching resource and means to identify a species without knowing who the experts are or how to contact them.

	Number of observations	Number of species	Percentage of observations	Percentage of species
Marine species	5256	83	83.2%	83%
Terrestrial species	999	15	16%	15%
Native terrestrial species	408	8	6%	8%
Introduced terrestrial species	591	7	9%	7%
Freshwater species	63	2	1%	2%
Chitons	760	8	12%	8%
Nudibranchs (excludes *Onchidella* and *Scutus*)	184	5	3%	5%
Total	6318	100		

Place in the top-100 list	Species	Number of observations
1	*Sypharochiton pelliserpentis*	270
2	*Cornu aspersus*	260
3	*Cellana radians*	190
4	*Perna canaliculus*	188
5	*Lunella smaragdus*	168
6	*Chiton glaucus*	163
7	*Athoracophorus bitenticulatus*	144
8	*Diloma aethiops*	131
9	*Dicathais orbita*	124
10	*Haliotis iris*	109
11	*Cookia sulcata*	107
12	*Ischnochiton maorianus*	107
13	*Xenostrobus neozelanicus*	107
14	*Haustrum scobina*	104
15	*Austrolittorina antipodarum*	103
16	*Alcithoe arabica*	103
17	*Spirula spirula*	101
18	*Cellana ornata*	96
19	*Austrovenus stutchburyi*	95
20	*Limax maximus*	93

Book review - Subtidal Invertebrates of New Zealand – a Diver's Guide

by Ian Townsend

I was looking in odd corners of my bookshelf to see where I could stow yet another recently acquired item when I came across this book, which I had overlooked for some time. It was so fascinating I thought other club members might like to know about it. *Subtidal Invertebrates of New Zealand – a Diver's Guide* by Stephen Wing (ISBN9781877257582) is profusely illustrated by photos of living specimens. It covers some shells including chitons, but to me it was all the other animals that made it so attractive. It gives a huge range of everything from crabs to corals and many other examples of living marine invertebrates that I scarcely knew about. For the rest of the evening I was engrossed in its 148 pages.

Wellington Shell Club 2018-2019

President: Jenny Raven • PO Box 12163, Thorndon, Wellington 6144 • Email: ravenjay@xtra.co.nz

Vice President: Kris Woods • Email: kris.woods@xtra.co.nz

Secretary: Carolyn Krebs • PO Box 12163, Thorndon, Wellington 6144 • Email: carolynkrebs20@gmail.com

Treasurer: Roger Woods • PO Box 12163, Thorndon, Wellington 6144 • Email: roger.woods@xtra.co.nz

Editors: Pat Lakeman and Kerry Walton • Email: pat.lakeman@xtra.co.nz

Newsletter & Librarian: Jill Burnett • 84 Brougham Street, Mt Victoria, Wellington 6011 • Telephone 384 7418

Sales table and raffles: Kris Woods

Website: Roger Woods • http://www.wellingtonshellclub.org.nz

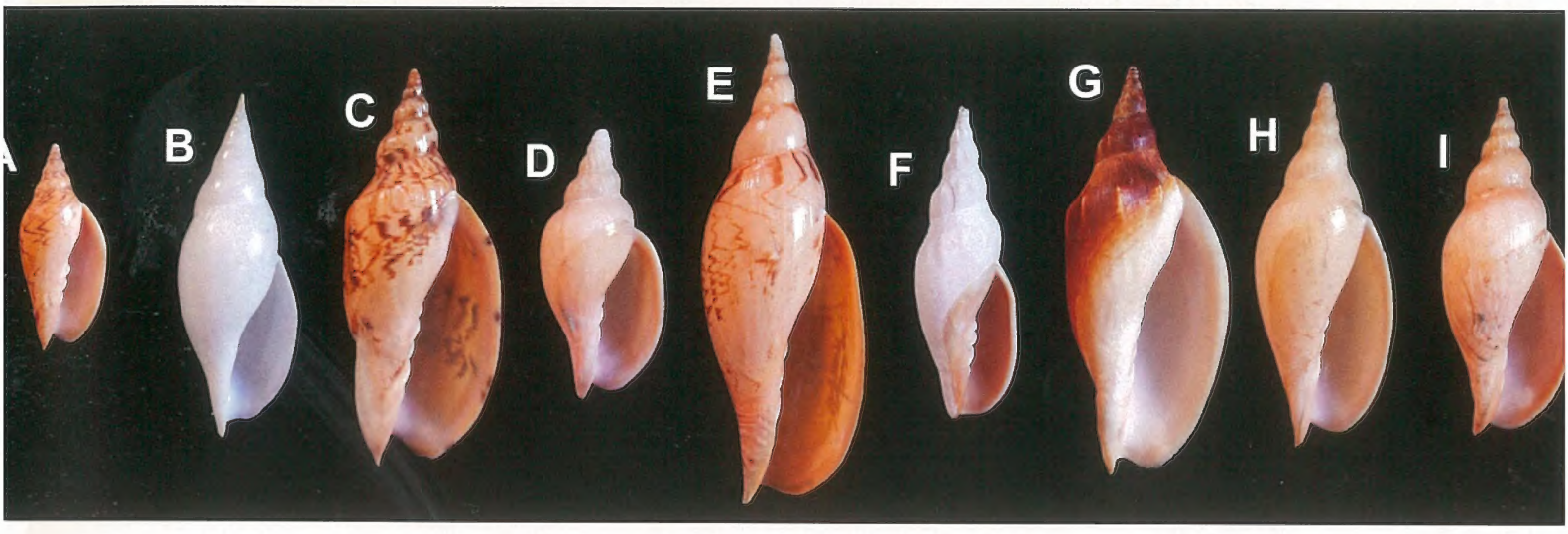
About *Cookia*

Cookia is the journal of the Wellington Shell Club and is published annually. *Cookia* was first published in 1976; prior to that date Wellington Shell Club published a Circular (1956-1965) and then a Bulletin (1967-1975) as well as occasional Study Notes on families of molluscs. For information on earlier publications see the Club's website: www.wellingtonshellclub.org.nz. To request back copies or copies of articles please contact Jill Burnett, 84 Brougham Street, Mt Victoria, Wellington 6011.

Your editors strive to attain a high quality of publication and careful fact-checking. The scope of articles is intended to reflect the differing specialties, levels of interest and experience within the Club: we hope all members will be able to contribute should they wish. We welcome both scientific and non-scientific articles, opinion pieces, photos, drawings and poems, and articles not directly related to shells or shell collecting so long as they have some relevance.

Your contributions are greatly appreciated - editorial policies and formatting suggestions for anyone considering submitting articles for future editions are available on the Club's website, or you are welcome to consult the editors. Photos or drawings provided should be of a high resolution, & supplied as individual files (i.e. not embedded into text). The editors may be able to arrange for imaging of specimens if required. Unless of an in situ individual, an assortment of specimens in one shot or an artful context, it is preferred that specimens are photographed at 90° to the height/length axis of the shell, with apertural views of gastropod species preferred. Multiple views, angles or images of the same specimen are appreciated.

Identification challenge solution:



A) *Alcithoe fusus* B) *Provocator mirabilis* C) *Alcithoe arabica*
D) *Alcithoe lutea* E) *Alcithoe fissurata* F) *Alcithoe flemingi*
G) *Alcithoe jaculoides* H) *Alcithoe tigrina* I) *Alcithoe pseudolutea*